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SOME NOTES ON THE BIRDS OF SOUTHERN PALAWAN AND
ADJACENT ISLANDS

By JOHN T. ZIMMER
(*Port Moresby, Papua*)

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SOME NOTES ON THE BIRDS OF SOUTHERN PALAWAN AND ADJACENT ISLANDS

By JOHN T. ZIMMER

(*Port Moresby, Papua*)

In 1916 it was my good fortune to spend most of March and the first few days of April on Palawan, perhaps the most interesting island of the Philippine Archipelago, taken from a natural-history standpoint. Geographically, Palawan is very close to Borneo, and this proximity is reflected to a marked degree in the fauna of the region.

During the visit in question particular attention was paid to the bird life of the area, and a number of very interesting avian species were collected. Some of these are of particular value in view of their rarity everywhere or because of their infrequency of occurrence in the Philippine Islands or in the local fauna of Palawan. Some are new to that island and one is sufficiently distinct from the typical form, as found in other parts of the Archipelago, to warrant its description as new.

The bulk of the collection is not of exceptional importance otherwise than as the record of the captures may be of value in considering the distribution or relative abundance of the species concerned. Certain birds were seen which were not collected for one reason or another, but as all of these have been taken on Palawan by previous workers and as most of them are well known to me through acquaintance in other parts of the Philippines, there are few of them whose identity is at all doubtful. To make the account complete, all forms that were seen are listed whether collected or not, and the specimens taken are catalogued. These specimens are in my private collection at Lincoln, Nebraska, U. S. A.

I am indebted to Mr. R. C. McGregor, of the Philippine Bureau of Science at Manila, for freedom of access to the collection of that institution and for his assistance in the comparison of certain specimens, and to Mr. Frank Reid, formerly lieutenant-governor of southern Palawan, and his assistant Mr. Tobin for many courtesies extended during the period of investigations.

ITINERARY

Leaving Manila on the steamship *Panglima* I reached Puerto Princesa, the capital of Palawan, on March 4. That afternoon I

visited the forests back of the town and began the series of observations on which these notes are based. Leaving Puerto Princesa that night I arrived next morning at Brooke's Point which remained my headquarters for most of the remaining time.

Brooke's Point, or Point Sir James Brooke, is the name given to a sandy spit at the northern end of Ipolote Bay, a shallow harbor on the eastern coast of Palawan near its southern end. The adjoining region consists of a low sandy beach at the very edge of which begins a hardwood forest, overgrown with vines, creepers, and underbrush, extending inland for an average distance of a kilometer, there giving way to a grassy plain, marked with occasional thickets and scattered trees and bushes, which reaches to the mountains in the interior. Small streams and tidal swamps intersect the region with fringing vegetation of mangrove, nipa palms, or bamboo, the last occurring more commonly in the more open country. The whole area is nearly level until the mountains are reached. Outwardly the beach is fringed by coral reefs or sandbars or is open to the sea.

There is a small Moro settlement, Lara, at Brooke's Point and in the surrounding country may be found occasional huts of the Tagbanuas, sometimes with a greater or less amount of cultivated or cleared land nearby. These clearings and the native trails are the only open spaces of any great size in the forest, although certain parts of the latter are of a more open nature than others. It was along the trails that I did most of my collecting. Progress was difficult in the virgin jungle, and the birds there were not easy to approach. Moreover the species to be found there were usually near the trails in greater abundance. Consequently I found that the time spent in breaking a way through trackless areas could usually be more profitably spent in following a pathway that was already cleared.

I collected in the vicinity of Brooke's Point from March 5, the date of my arrival there, until the evening of March 17. On that date I embarked in a small launch with Governor Reid and Mr. Tobin, whose kindness made it possible for me to accompany them on an inspection trip around the southern end of the island and thus to visit a portion of the territory that otherwise I would not have seen.

March 18 we arrived at Sarong, a small village situated at the foot of a rocky bluff, which was overgrown with low jungle and extended along the shore. The principal feature of interest here was a broad coral reef, which was exposed at low tide and formed a feeding ground for numerous shore birds and

waders. We spent the day at this point and embarked again late the same evening.

March 19 we reached Dadagican at daylight and remained there until afternoon. This place consisted of a few houses grouped together on a small, low island, which was otherwise covered almost entirely by a coconut grove. Two species of herons, one species of kingfisher, a swallow, a swallow-shrike, a sunbird, a crow, and a lone sandpiper comprised the bird life of the island.

After leaving Dadagican we arrived at Bankalan at dusk, but as we departed again the same night I was unable to get any time in the forest at this place. The next morning, March 20, we reached Balabac Island. Our stay at Balabac was limited to one day. I found the country near the town of that name to consist mostly of forested hills of low elevation, without any level plains or open grassland.

March 21 we arrived at Dandelit where we spent the morning. This settlement is on the mainland of Palawan on the western coast and is situated in a small pocket at the foot of forested hills and cliffs which almost or quite meet the sea on either side. The jungle hereabouts is very dense, and as we put to sea again at noon, I was able, in the brief time available, to penetrate but a short distance into the tangle.

On the evening of March 21 we reached the settlement of Candauaga, which, also on the mainland, lies on a swampy plain at the mouth of a river, with a certain amount of good forest very near the shore and considerably more farther toward the mountains. This was my point farthest north along the western coast, as I made no effort to push on in that direction but remained at Candauaga for several days and explored the surrounding country.

The day after arrival I proceeded to the mouth of a second river a short distance to the south. At a small settlement nearby a boat and boatmen were secured, and I followed up the stream to the neighborhood of forests in the interior, returning that evening to Candauaga. Two days later I left most of my equipment in the launch, and accompanied by a Moro policeman from the Governor's party set out to cross the island to the eastern coast.

The first stage of the journey was made that night by boat, down the coast to the mouth of a broad river and up the current of the latter as far as our boat could go. There we embarked

in a little dugout and pushed on farther and when even this light craft grounded on the shallows we landed and made the rest of our way on foot. At a settlement not far from the landing guides were obtained for the mountain trails.

Leaving the settlement we took to the forest paths and crossed the mountain ridges until midafternoon, when we made camp by a little river high in the hills. The forest here was very dense, and birds apparently were scarce. Next day by an early start and by dint of strenuous hiking we managed to reach the settlement of Bonabona at dark. The way led first through mountain forests, then over grassy hillsides, and finally dropped to level, tree-dotted plains, alternating with swamps and marsh-land, until the sandy beach of the Sulu Sea was reached a short distance below our destination. From there we followed the beach to Bonabona.

I was unable to induce the natives of Bonabona to take me up the coast to Brooke's Point by boat, owing to heavy seas. Accordingly next morning, with fresh carriers, I took up the trail on foot and reached the desired locality by nightfall. The trail embraced seashore, grassed plains, open woods, mangrove swamps, broad river valleys, some of which were dry, and heavy forest, all practically at sea level.

On March 28, the day following arrival, I resumed operations at Brooke's Point and continued them until April 3, which was marked by the appearance of the steamer on which I planned to leave the locality. On the voyage up the coast between Brooke's Point and Puerto Princesa, the vessel stopped at Calatugas on April 4 and 5 and at Tagbariri on April 6 and 7. I went ashore at both places and found much the same type of country at both—a low sandy beach with forest in the rear. Beyond Tagbariri other matters occupied my attention and no further detailed notes were taken.

MEGAPODIIDÆ

Megapodius cumingi Dillwyn.

Occasionally I saw megapodes, usually in pairs, along the shore near Brooke's Point. The birds were very wary and when alarmed took a running flight into the nearby jungle, uttering a loud cackling note. I flushed one pair from the bottom of a burrow, which had been scratched for a depth of about one meter below the roots of an old stump. The bulky mounds constructed by the species were numerous in the woods bordering the beach.

PHASIANIDÆ

Gallus gallus (Linnæus).

Jungle fowls were not rare in the forest but were more often heard than seen. One of the earliest sounds of the morning, before the rest of the forest seemed fully awake, was the crowing of the wild roosters back in the jungle. A flock of these birds, composed of a cock and six hens, remained in a certain part of the woods near the beach trail about two kilometers below Brooke's Point and was frequently encountered at that place. Other records are from Bonabona, Candauaga, Puerto Princesa, and Balabac.

TURNICIDÆ

Turnix fasciata (Temminck).

This button quail was often flushed from the grass, rather abundantly on the open plains near Brooke's Point and Bonabona. It frequently lay close when discovered or skulked silently through the grass and was by no means easy to see unless it took wing. Localities for this species are Brooke's Point, Sarong, Candauaga, Tagbariri, Bonabona, and Balabac. One specimen was taken at Tagbariri.

TRERONIDÆ

Treron nipalensis (Hodgson).

Thick-billed green pigeons were abundant in the neighborhood of the fruit trees in the forest. While moving about through the foliage they were easy to locate, but when alarmed they would stop and sit motionless, whereupon they seemingly melted into their leafy surroundings. I frequently collected other sorts of birds from various trees favored by the present species and often, at the report of the gun, saw the branches disgorge a score of these pigeons of whose presence I was entirely unaware until the sudden uproar and the charge of shot tearing through the foliage drove the hidden occupants from their retreat. Although most often assembling in flocks, these pigeons not infrequently went about in pairs, more rarely alone, and it is possible that the flocks at this time consisted of a number of pairs. My records are from Brooke's Point, Sarong, Dandelite, Candauaga, Bonabona, Calatugas, Tagbariri, and Balabac. Specimens were taken at Brooke's Point.

Osmotreron vernans (Linnæus).

Pink-necked green pigeons were abundant in the trees about the open and not uncommon at the edge of the forest. The

species was breeding at this time, and I often saw flocks of twenty or thirty males without one of the opposite sex. On March 17 I discovered a nest in one of the scattered trees on the grassland beyond the forest at Brooke's Point. The female was on the nest and remained there until I started to ascend the tree, when she left with a sudden rush and took a long round-about flight, which brought her up again to the top of a nearby tree within sight of her nest, where she remained until I left the neighborhood. The nest was a loosely constructed platform about 13 centimeters in diameter and was placed some 4 meters above ground. The eggs, which were distinctly visible from the ground through the bottom of the nest, were pure white, regularly elliptical, and measured 28 by 22 and 26 by 21 millimeters. Both were fresh. A second nest was discovered at Calatugas on April 5, similar to the first but only 1.2 meters from the ground. Unfortunately the eggs from the latter were broken before measurements could be taken. I found *O. vernans* at Brooke's Point, Candauaga, Bonabona, Calatugas, Tagbariri, and Puerto Princesa. The species is well distributed through the Philippines.

Muscadivores palawanensis (Blasius).

The Palawan imperial pigeons were common throughout the region wherever there was forest. Their deep "ah-hoo-oo" and guttural "kr'-r-r-r-r, kr'-r-r-r-r, kr'-r-r-r-r" were familiar sounds along the trails through the deep woods, although the birds became silent or took flight when aware of being approached. Since they usually chose the upper branches of the tall trees for their feeding grounds, it was not always easy to catch sight of them, even when they were noisy and moving about, nor was their collecting easy, for their perch was sometimes nearer rifle range than shotgun range. My records for this bird are from all points except Dadagican. Specimens are from Brooke's Point.

Myristicivora bicolor (Scopoli).

I saw a single nutmeg pigeon at Brooke's Point on March 12 but was unable to get within shotgun range of it owing to its wariness. This species was reported to me as being common on the west coast of Palawan near the settlement of Alfonso XIII, but I was unable to verify this for myself. Previous observers have recorded the species from other localities in Palawan.

PERISTERIDÆ

Spilopelia tigrina (Temminck and Knip).

On several occasions in more or less open places along the trails I encountered the Malay spotted dove in pairs or in groups of four and five. It was not an abundant species. Usually the birds were on the ground; sometimes at low elevations in the scrub thicket. I have records from Brooke's Point, Bonabona, Candauaga, Tagbariri, and Calatugas. One specimen was taken at the first mentioned locality.

Chalcophaps indica (Linnæus).

I often saw the Indian bronze-winged dove in the forest, always singly as I have found it elsewhere. This species is always wary, is very swift on the wing, and darts through the woods at a rate of speed that would seem to threaten collision with tree trunks and other obstacles. In a dark forest it seems but a moving shadow. My notes record the species from Brooke's Point, Danelit, Candauaga, Bonabona, Puerto Princesa, and Balabac.

Calœnas nicobarica (Linnæus).

On March 15 I flushed two Nicobar pigeons in the deep forest at Brooke's Point but did not get the specimens, nor did I find the species at other times. They were reported to me as occurring commonly at Balabac and on the west coast of Palawan, but I did not see them at either place. Locally they were known as *siete colores*.

CHARADRIIDÆ

Arenaria interpres (Linnæus).

A single turnstone was seen on the coral reef at Brooke's Point on April 1. I was unarmed at the time, and when I returned with a gun the bird had disappeared.

Squatarola squatarola (Linnæus).

On April 1 I found a flock of black-bellied plovers at Brooke's Point and secured one of the lot. This was the only occasion that I met with the species in Palawan.

Ochthodromus geoffroyi (Wagler).

Plovers of the genus *Ochthodromus* were occasionally seen along the beach at Brooke's Point and Sarong. The single specimen that I secured at Brooke's Point is *O. geoffroyi* to which species possibly all the individuals that I saw belong, although

both *O. mongolus* and *O. veredus* have been taken in Palawan by previous collectors.

Numenius variegatus (Scopoli).

At Sarong on March 18 I saw a number of curlews on the coral reef at low tide, but they were exceedingly wary, and I had difficulty in securing specimens. The reef was broad and the curlews kept to the seaward edge of it in company with numerous individuals of *Demigretta sacra* and *Bubulcus coromandus*, some of which always took alarm, if the curlews did not, and startled the whole flock into hasty flight, the result being that whenever I attempted to cross the intervening space of reef the entire company would be off and away long before I got within range. By taking a stand on the beach and waiting for fifteen or twenty minutes, however, I succeeded in so disarming the suspicion of the birds that they worked their way gradually into gunshot range and I was able to secure two of them before they got away again. Both individuals were females, and both were remarkable for their unusually long bills which measured 90 and 91.5 millimeters along the culmen, respectively, about the maximum for *N. variegatus*.

Actitis hypoleucus (Linnæus).

This common sandpiper, the only representative of its genus in the Islands, was frequently seen along the seashore or river banks or at the edges of forest pools. Although numerous it was very solitary in habits. I found it at all points visited.

[*Pisobia* sp.?

There were one or two small sandpipers belonging to this group found occasionally along the reefs at low tide in the vicinity of Brooke's Point, while others were seen at Sarong although no specimens were taken. Most of them were probably *P. ruficollis* (Pallas), which is common and widely distributed in the Islands, but some of them may have belonged to the rarer *P. damacensis* Horsfield. Both forms have been recorded from Palawan.]

CEDICNEMIDÆ

Orthorhamphus magnirostris (Vieillot).

At Tagbariri on April 6 I saw an Australian stone plover alone on a reef which was cut off from the mainland by a channel of deep water. It was impossible to get within range and an experimental shot only had the effect of driving the bird to the far side of the reef, whence it shortly took flight seaward for a more distant islet.

ARDEIDÆ

Pyrrherodia manilensis (Meyen).

On March 22 as I was floating down a river near Candauaga, a heron of the present species flapped lazily across the river in front of the canoe and disappeared in the mangroves that lined either bank of the stream. Another individual was seen on the reefs at Brooke's Point after I returned to that locality. These were the only instances of the occurrence of this species that came to my notice.

Demigretta sacra (Gmelin).

I saw the first blue reef heron at Brooke's Point on the afternoon of March 17. It had certainly not been in the neighborhood before that date. The following day at Sarong, farther south, the species was common and still later it was seen at Dadagican, Candauaga, and Bonabona. These are apparently the first records for Palawan, although *D. sacra* has been found on Cuyo and Balabac, and therefore its occurrence on the former island is not entirely unexpected. Specimens were taken at Brooke's Point and Sarong.

Bubulcus coromandus (Boddaert).

Indian cattle egrets were present at Brooke's Point, Sarong, Dadagican, Candauaga, Bonabona, and Tagbariri. They were not abundant at any of these places.

FALCONIDÆ

Accipiter virgatus (Temminck).

At Calatugas on April 4 I saw a small hawk, which I am certain belonged to the present species, although unfortunately I was unable to secure the specimen. I refer it to *A. virgatus* because that species, but none of its congeners, has been recorded previously from Palawan.

Spilornis bacha (Daudin).

While crossing the mountains in the interior of Palawan on March 26 I saw a serpent eagle circling about, which came near enough to permit the recognition of its characteristic markings but not near enough for a shot. Palawan birds are referable to *S. bacha*.

Butastur indicus (Gmelin).

The tic-wee buzzard was not uncommon in the more open country back of Brooke's Point and was noted also at Calatugas, Bonabona, Puerto Princesa, and Candauaga. If not soaring

overhead it was perched on some exposed position where it kept close watch over the surrounding country.

CACATUIDÆ

Cacatua hæmaturopygia (P. L. S. Müller).

Cockatoos were abundant throughout the forest at all points visited except Dadagican. Owing to their active habits, their conspicuous plumage, and their noisy, screaming voices they were in evidence somehow most of the time. A certain dap-dap, or coral, tree (*Erythrina* sp.?) in the forest near the settlement at Brooke's Point was a favorite resort of these birds, and there they frequently congregated in some numbers. Most of the cockatoos had their ventral plumage stained brown with some gummy vegetable substance, giving them a very dirty appearance.

On May 4 at Calatugas I saw a pair of cockatoos at a hole near the top of a dead tree about 18 meters from the ground. It was the only suggestion of nesting conditions that I noticed.

PSITTACIDÆ

Prioniturus cyaneiceps Sharpe.

Blue racket-tailed parakeets were probably not uncommon at Brooke's Point and elsewhere, but as they were neither very noisy nor very conspicuously garbed they were not often seen. Their note was a sort of harsh, grating squeak, which I heard a number of times before I succeeded in associating it with the parakeets, but which after I had learned it often furnished me with the first intimation that these birds were in the vicinity. They easily concealed themselves in the foliage by the simple process of sitting motionless, though they might be in plain sight. Some of the individuals were in good plumage; others had the feathers badly abraded, especially the terminal rackets of the tail. Brooke's Point and Candauaga are the only localities where these birds were seen. Specimens were taken at Brooke's Point.

Tanygnathus lucionensis (Linnæus).

The Philippine green parrot was very abundant in the neighborhood of Brooke's Point. It congregated in flocks of greater or less size, which frequented the forest, often in company with the cockatoos whose noisiness was, if anything, excelled by the vociferation of the present species. Like the cockatoos these parrots were wary and alert, and although they might remain in apparent indifference to the approach of an observer they

were well aware of the narrowing distance and at the proper time departed with unceremonious speed. They often flew overhead clear above the forest, screaming loudly. My observations of *T. lucionensis* were confined to Brooke's Point, Candauaga, and Calatugas. Specimens were taken at Brooke's Point.

CORACIIDÆ

Eurystomus orientalis (Linnæus).

At Brooke's Point and Tagbariri where the edge of the forest adjoined the open country or in the neighborhood of the clearings, a few broad-billed rollers were observed. Even at these places they were not common.

ALCEDINIDÆ

Alcedo bengalensis Gmelin.

The usually common and widely distributed Asiatic kingfisher was not so common in southern Palawan as I have seen it elsewhere, but it was occasionally noted about the mangrove swamps and river banks. Records are from Brooke's Point, Sarong, Candauaga, Bonabona, Calatugas, Tagbariri, and Balabac.

Alcedo meninting Horsfield.

The Malayan kingfisher was much rarer in the region visited than its congener, the preceding species. I saw only two individuals, one at Brooke's Point on March 15 and another near Candauaga on March 22. Both were along the mangrove-bordered banks of rivers.

Halcyon coromandus (Latham).

Two ruddy kingfishers were noted on March 26 in the mountains behind Bonabona, but they escaped in the thick jungle. No others were seen.

Oberholser¹ has recently separated the Philippine form of this species under the subspecific name *ochrothorectis*. Since the Bornean *minor* has been taken in Tawitawi it seems probable that it would also occur in Palawan; therefore I will not attempt to place subspecifically the birds that I saw. In Oberholser's paper the generic name *Entomothera* is used for this species, not *Halcyon*. The characters on which the separation is based (conformation of bill, comparative length of primaries, and relative measurements of bill and wing) are such that most of the Philippine species of *Halcyon* could each be isolated there-

¹ *Proc. U. S. Nat. Mus.* (1915), 48, 652.

upon with equal facility. I have, moreover, specimens of the present species which do not agree well with the distinctive characters given for *ochrothorectis*. I have preferred, therefore, to follow the nomenclature used by Sharpe and followed by McGregor.

Halcyon pileatus (Boddaert).

On March 15 at Brooke's Point I saw a solitary black-capped kingfisher at the edge of a mangrove swamp into which the bird retreated at my approach. As progress in the swamp was infinitely more difficult for me than for the bird, it soon escaped entirely out of sight. At Balabac on March 20 I saw another of the species along a stream among the wooded hills, and on March 22 at Candauaga I saw a third at the edge of a nipa swamp bordering one of the rivers. I succeeded in getting none of them.

Halcyon chloris (Boddaert).

White-collared kingfishers were the commonest of all of their family in the region. More, perhaps, were noted in the neighborhood of human habitations than in the remote districts, possibly because the birds, like man, favored more or less cleared areas. A pair inhabited the tiny grove of coconuts behind the governor's house at Brooke's Point, where they were in evidence every day, for the most part fearless at my approach.

BUCEROTIDÆ

Gymnolæmus lemprieri (Sharpe).

The Palawan hornbill was a very interesting bird of which I saw rather less than I desired. It seemed to be a silent creature most of the time, not given much to vocal expression, but its voice when used was loud and raucous although less resonant and powerful than that of the larger *Hydrocorax* of other of the Philippine Islands. These hornbills were wary, though when startled they did not always seek distant forest depths but often settled again in trees hardly out of sight of the perches they had just abandoned. There, however, they remained alert and watchful, prepared to seek further safety in flight perhaps more readily than the first time they had been disturbed. They were fond of a certain large-seeded fruit, which was common in the forest, and upon which they were most often seen feeding in company with various of the pigeons. Occasionally solitary

individuals were seen, but flocks were much more common. I was able to get but a single specimen, a female, with bill much less prominently developed than that possessed by the males.

CAPRIMULGIDÆ

Caprimulgus macrurus macrurus Horsfield.

Nightjars were rather common at Brooke's Point where I often heard them in the evening along the beach or in the nearby clearings, uttering their weird "owk-owk," then after a little pause, "owk-owk" again, and so on monotonously well into the night, each call, perhaps, answered by other birds nearby. Occasionally I flushed them at the edge of the forest during the daytime and one specimen I took in a bamboo thicket along a stream in more or less open country. In daylight they were silent and stationary unless disturbed; only at night were they really active. Sometimes when I was not busy after dark, I would fasten a small acetylene searchlight to my hat and, armed with gun and bag, would go out jack-lighting for these birds and for other night wanderers of the forest. Guided by the sound of the monotonous note of the nightjars I could get within range of one of them before it took alarm, the light from the lamp producing an answering gleam from the bird's large eye, which would shine with a reddish glow in a single spot of fire that formed an excellent target. At times, before I could shoot, or if I continued to approach, the spot of flame would wink out and in a moment or two I would hear the interrupted monotone taken up at a different point and I would know that my bird had moved to a safer distance. If the night were brilliantly moonlit I might see the shadowy flutter of wings as the creature left its post or might even see it resting wherever it might be. Once or twice on such occasions I have thought, though I could never be certain of it, that the nightjars were then not the horizontal, crouching forms that they were in daytime, but that they sat more alert, more erect. I know that they often forsook terrestrial haunts, for I could see them perched on the tops of small bushes about a meter above ground.

I saw and collected birds only at Brooke's Point, but I heard others, some of which were undoubtedly the same form as the present one, at Candauga and Tagbariri. *Caprimulgus manillensis* and *C. jotaka* have both been collected in Palawan, but all of my specimens are referable to *C. macrurus* and to the typical variety of that species.

CUCULIDÆ

Cacomantis merulinus (Scopoli).

The rufous-bellied cuckoo was quite rare in the localities visited. A single female was seen and collected at Brooke's Point on March 14.

Chalcococcyx xanthorhynchus (Horsfield).

The beautiful little violet cuckoo was not common. I found it only thrice. All three birds were rather high up in tall trees in the forest at Brooke's Point, one at such a height that when I collected it I did not know what I had taken until it reached the ground. All three birds were males.

Eudynamys mindanensis (Linnæus).

Koels were heard not uncommonly in the forest, but owing to their secretive habits they were seldom seen, and then usually as they were slipping out of sight into some tangle of vines and creepers. Their song, if such it may be called, was a weird performance, especially if heard at the dead of night in the heart of the jungle. Beginning with a measured "ba-how", ba-how", ba-how", the syllables would be repeated in a crescendo of rising pitch and acceleration until the last notes were given in a frantic "how-how-how-how" that was broken off abruptly, leaving a silence which seemed the more intense because of the preceding clamor.

Two species, *E. honorata* and the present form, have been recorded from Palawan but two specimens, male and female, which I secured at Brooke's Point are both referable to *E. mindanensis*. I noted koels, whichever form they may have been, at Brooke's Point, Tagbariri, Candauaga, Calatugas, and Puerto Princesa.

Centropus javanicus (Dumont).

Coucals were seen at Brooke's Point, Bonabona, and Candauaga in the areas of tall grass. They were not rare, but like the koels they were heard more often than they were seen. I saw only *C. javanicus*, although *C. sinensis* is recorded from the island.

Dryococcyx harringtoni Sharpe.

Harrington's cuckoo was found in the more jungly parts of the forest, usually skulking amongst the foliage of the lower growths and the vine-tangled thickets. In spite of its bright colors it is not a conspicuous bird. I found it in the lowland forest as well as on the wooded mountain ridges. Records and

specimens are from Brooke's Point, Candauaga, Bonabona, and Balabac, and records only from Sarong and Tagbariri.

PICIDÆ

Tiga everetti Tweeddale.

Everett's three-toed woodpecker was moderately common and well distributed over the region. I found it in the deeper parts of the forest and sometimes in the thicker bits of scattered woodland on the plains. My records are from all points visited except Dadagican. Specimens are from Brooke's Point.

Thripornax hargitti Sharpe.

I found Hargitt's black woodpecker to be rare and shy in the vicinity of Brooke's Point; at the other localities I did not find it at all. It is possible that there was only a single pair near Brooke's Point. I rarely saw more than one bird, which was very restless and shy, continually moving from place to place in the forest. I never got within range of it until March 17. On that day, while crossing a swampy section of woods, I happened to take shelter from a sudden downpour of rain on the leeward side of a large tree whose buttressed roots furnished ample protection from the shower. While there I heard the call note of the species with which I had become familiar, and on looking out from my retreat I saw one of the woodpeckers on a tall, dead tree nearby, just within range. I dropped it from where I stood, retrieved it, and returned to my shelter. Again I heard the unmistakable note and looked out just in time to see a second bird edging out of sight around the dead tree trunk. I circled the bole in the opposite direction, but the woodpecker had evidently taken flight when out of my sight around the trunk, and I did not get it. It was the last time I saw the species in Palawan. My specimen was a male. I have carefully compared this specimen with the series from Masbate in the collection of the Bureau of Science with which it seems to agree perfectly. Palawan is the type locality of this species but as has been pointed out by other workers it is strange that the Masbate bird is conspecific, in the case of the present genus.

PITTIDÆ

Pitta propinqua (Sharpe).

I searched for the Palawan pitta the whole time that I remained in the region, but it was near the end of my investigations before I found it. On March 31 I found a lone individual in the heart of a bit of jungle, quite close to the settlement at

Brooke's Point. It would have been overlooked entirely had it not taken flight, for it was silent and well hidden in a particularly dense thicket not in my line of travel. The specimen was collected and proved to be a male.

Pitta atricapilla Lesson.

The black-headed pitta was occasionally seen and frequently heard in the forest, especially in those parts overgrown with underbrush. I found it at Brooke's Point, Sarong, Candauaga, Balabac, and along the trail across the mountains between the east and west coasts. Specimens were taken at Brooke's Point and Balabac.

Most of the pittas, of this and related species, which I have found have been on the ground or at most a few feet above it, on fallen tree trunks and the like. One of the present species that I saw at Brooke's Point, however, proved an exception to the general rule. I heard this bird distinctly and had no difficulty in reaching its approximate neighborhood. Once there, however, I was puzzled to get the bird in sight, although it continued its explosive "wow ha" apparently only a few yards away. Since the ground was more or less open thereabouts I was able to scan carefully every bit of it, but without result until I happened to glance upwards when, to my surprise, I saw the pitta on a projecting limb of a tree twenty feet above ground.

HIRUNDINIDÆ

Hirundo javanica Sparrman.

The Asiatic swallow was the only member of its family that I noted in Palawan. I saw it at all points visited, where it was present in small numbers, usually near the settlements.

MUSCICAPIDÆ

Hemichelidon griseosticta Swinhoe.

Two gray-spotted flycatchers were seen in Palawan, one at Candauaga and the other at Brooke's Point, and both were secured. The Candauaga specimen differs somewhat from the other and from all other specimens of the species that I possess. The brown streaks on the breast and sides occupy the major portions of their respective feathers, the white of the underparts is tinged with buff, the edging of the tertials and greater wing coverts is deep buff, while the under wing coverts are more tawny than is usual. The base of the bill is yellowish, and the entire appearance suggests the description of *H. sibirica*,

but the bird shows signs of immaturity and is in rather poor plumage, so that I would hesitate, without a series of *sibirica* at hand, to place my specimen in that species. There is a single record of *sibirica* from Palawan.

Cyornis lemprieri Sharpe.

Lempriere's *cyornis* was not abundant but was rather well distributed and of sylvan habits. My records are from Brooke's Point, Dandelit, Candauaga, and Balabac. Specimens were taken at the first three localities.

Two of my males are typical *Cyornis lemprieri*, but a third, No. 1445, is indistinguishable from *C. philippinensis* by the characters usually given for the separation of the two species. The orange hue of the under surface of the body is no paler than in my Luzon birds, and while the throat is paler, inclining to whitish, the same character is exhibited in some specimens of *C. philippinensis*. With this fact in mind I made a comparison of my specimens with the series in the Bureau of Science collection and found the existence of other characters which serve very well to separate the two forms, as represented in the two collections. In all of the males of *C. philippinensis* the black chin spot is present and well marked. In some of the males of *C. lemprieri* this spot is also present but never to the extent exhibited by the maximum of *philippinensis*, while it is sometimes entirely lacking. Where it is present, the specimens all possess the lighter tints on breast and throat, as indeed they do in some cases where the chin is not black, but in all cases where the ventral coloration approaches that of *C. philippinensis* the black chin spot is lacking. In *C. lemprieri*, also, the sides of the breast average more broadly blue, and in one of my specimens the feathers across the breast are narrowly edged with blue. The females are, of course, unmistakable.

Cyanoptila bella (Hay).

On March 28 at Brooke's Point I collected a female of this interesting species at the edge of the forest, where it was conducting forays from a perch on a vine-covered stump, darting out after insects and returning to its post in true flycatcher fashion. It was the only one of its species that I saw.

Collected by Everett in Balabac, and recorded by him in 1895, the Japanese blue flycatcher has not been found since in the Philippines; nor is there any other evidence of its occurrence there except the notation by Sharpe in his Hand-list, in which Palawan Island is given as a habitat of the species as well as Balabac

—Balabac evidently on Everett's record, Palawan on evidence which I do not know.

Hypothymis occipitalis (Vigors).

The black-naped flycatcher was quite common and widely distributed. Records are from all points except Dadagican. Specimens were secured at Brooke's Point.

Rhipidura nigritorquis Vigors.

The only black-and-white fantails that I saw were at Bonabona on March 25 and 26. In both cases they were in the neighborhood of mangrove swamps.

Xeocephalus cyanescens Sharpe.

I saw the large blue flycatcher at Brooke's Point and Candauaga and in the mountains of the interior, but it was not very abundant at any of these places. Its habitat seemed to be the thickets and second growth of the forest. Specimens were taken at Brooke's Point.

CAMPOPHAGIDÆ

Artamides difficilis (Hartert).

The Palawan artamides was common throughout the forest, where it remained in the higher branches. I usually saw the species in pairs, though sometimes singly. It was rather impulsive, neither obtrusive nor retiring. Records are from all points but Dadagican. Specimens are from Brooke's Point.

Pericrocotus igneus Blyth.

The brilliant little fiery minivet was observed only at Brooke's Point and Puerto Princesa, at both of which places specimens were taken. Not many individuals were seen. It was always in the deep forest, very active and constantly moving about from place to place. Its note was a rapid twitter much like that of *P. cinereus*. This latter species I did not see, but since it has been found in Palawan by other workers, it may have been the author of the song on some of the occasions when I heard but could not see the minivets.

Lalage niger (Forster).

I saw a few examples of the pied lalage in the forest at Brooke's Point and Candauaga. Although common enough in certain other parts of the Archipelago, this species does not seem to have been recorded from Palawan by many observers.

Ægithina viridis (Bonaparte).

This pretty little species was found rather commonly at Brooke's Point, but at none of the other localities except Bonabona. Its favorite haunts were in the thickets of the more open country, though it occasionally visited the deep forest. For some time I heard the distinctive note of some bird I did not know, given from the upper foliage of the forest trees, but all my efforts to locate and identify the singers were unavailing. Even when I collected *A. viridis* in the forest, I did not associate it with the mysterious songsters, for the birds had been silent when I saw them. Later I found the more-favored resort of the species in the grassland thickets among the lower trees and less dense foliage, and there I was able to solve the puzzle, for the birds were singing plentifully and in full view.

PYCNONOTIDÆ

Chloropsis palawanensis (Sharpe).

Leafbirds were noted in the forest at several localities, but owing to their leaf-colored plumage they were most difficult to see when in moderately dense foliage. I found them hard to kill outright with fine shot, a circumstance for which I could only account by the cottony texture of the plumage, which undoubtedly offered more or less resistance to the penetration of the pellets. I found the species present at Brooke's Point, Candauaga, and Puerto Princesa. Specimens are all from the neighborhood of Brooke's Point.

Irena tweeddalei Sharpe.

Tweeddale's fairy bluebird was not uncommon in the deeper parts of the forest where I noted it most often in the vicinity of various fruit trees. It was inclined to be somewhat wary but was also inquisitive so that when I remained quiet enough it would often come quite close, although a sudden motion on my part would send it off again. The males, truly magnificent birds, were much more in evidence than the plainer females, which latter seemed to be of a more retiring disposition. My records are from Brooke's Point, Candauaga, and Puerto Princesa, at all of which places specimens were secured.

Microtarsus atriceps (Temminck).

The black-headed bulbul was commonly noted at several places. Usually it was at the edge of the forest or in thickets on the plains. Sometimes it was found singly, at other times in flocks

of a dozen or more. However, it was rather shy and hard to approach. My notes were made at Brooke's Point, Candauaga, Bonabona, and Puerto Princesa. Specimens were taken at Brooke's Point and Puerto Princesa.

Trichophorus frater (Sharpe).

The gray-throated hairy bulbul was quite common in the lower growths of the forest and about the fruit trees. It was given to a desultory sort of song of a somewhat conversational nature though hardly musical. Specimens were taken at Brooke's Point and Candauaga and the species was seen at all points visited except Dadagican.

Pycnonotus cinereifrons (Tweeddale).

The ashy-fronted bulbul was apparently less common than the preceding species, yet the lack of more records may have been on account of the birds' secretiveness, which sent them into the depths of the thickets at the slightest alarm and probably put them in hiding many times before I caught sight of them. Records and specimens are from Brooke's Point, Candauaga, and Bonabona.

TIMALIIDÆ

Turdinus rufifrons (Tweeddale).

I took two rufous-headed babblers at Brooke's Point and in the mountains shot one other, which was unfit to preserve. The species is reported to be a good whistler, but the individuals that I saw were silent.

Mixornis woodi Sharpe.

The Palawan tit babbler was very common over most of the region and was found about brush piles and in the thickets and undergrowths of both the deep forest and the more open country. It was quite fearless and could be approached rather closely. It was a very active little bird, almost constantly poking about its favorite haunts, usually close to the ground. My records are from all localities except Sarong and Dadagican. Specimens were taken at Brooke's Point only.

TURRIDÆ

Petrophila manillensis (J. R. Forster).

Eastern rock thrushes were fairly common in Palawan, about as numerous as in the rest of the Archipelago. I saw individuals at all localities except Sarong and Dadagican.

Kittacincla nigra Sharpe.

The Palawan black shama was the chief musician of the forests where I found it. Its sweet song had a wide range of tone and a number of variations, which the bird was not at all chary of demonstrating, although while performing it liked to keep hidden in the shelter of the fern thickets and other undergrowth. When startled, it did not fly far but took refuge quite near at hand behind the first convenient screen or at a little greater distance in the open. Except at Sarong and Dadagican it was noted regularly. Specimens were taken at Brooke's Point.

SYLVIIDÆ**Locustella ochotensis** (Middendorf).

I found the yellow grasshopper warbler by sheer luck, on March 17. I had just shot an *Ægithina viridis* from a low tree on the cogon plain, behind the forest at Brooke's Point, and had stooped to pick the specimen from the ground, when I saw a small brown bird disappearing into a patch of tall *talahib* grass. With my specimen in one hand, I steadied the gun and fired at the disappearing bird, which must have been out of sight before the charge of shot reached the place. I went forward, hardly hoping for success, but on parting the grass stems I found the warbler where it had fallen. This is the first record of *L. ochotensis* from the Palawan group of islands. It is not a common bird anywhere in the Philippines.

Orthotomus ruficeps (Lesson).

Rufous-headed tailorbirds were not common. I usually found them in the thickets and brush piles, where they skulked wren-like, and for the most part silent. Individuals were seen at Brooke's Point, Sarong, Candauaga, and Bonabona. Specimens were taken at Brooke's Point.

ARTAMIDÆ**Artamus leucorhynchus** (Linnæus).

The white-bellied swallow shrike was common about dead trees in the clearings and at the edge of the forest. It was noted at Brooke's Point, Dadagican, Candauaga, Bonabona, Tagbariri, Calatugas, and Puerto Princesa.

LANIIDÆ**[Otomela lucionensis** (Linnæus).

A single shrike of the genus *Otomela* was noted at Brooke's Point on March 8 but was not taken. As there is a possible

doubt as to the exact species which this bird may have been, I have bracketed the record, but I have little hesitation in referring it to the present form.]

Hyloterpe whiteheadi Sharpe.

The Palawan thickhead was rare. Three specimens only were secured, and these were all that I saw. All three birds were in the deep forest at Brooke's Point, shy and elusive.

PARIDÆ

Pardaliparus amabilis (Sharpe).

The Palawan titmouse was rather common in the forest, although not abundant. When seen it was sometimes associated with other species of birds, sometimes alone, but usually in small flocks of four or five individuals of its own kind. Records are from Brooke's Point, Sarong, Danelit, Candauaga, Bonabona, and Balabac. Specimens are from Brooke's Point.

SITTIDÆ

Callisitta palawana (Hartert).

It was only at Brooke's Point that I saw the Palawan nuthatch, but it seemed to be moderately common at that locality. It was a strictly forest form, very active and energetic, with the characteristic nuthatch habits of travelling upward, downward, or sideways, right side up or the reverse with equal facility, while exploring the cracks and crannies of the bark in search of food. Specimens were taken.

DICÆIDÆ

Dicæum pygmæum (Kittlitz).

Pygmy flowerpeckers were common in the forests at Brooke's Point, Sarong, Candauaga, and Bonabona. They often came to within a few feet of me, apparently impelled by curiosity and not at all governed by fear of the intruder.

Prionochilus johannæ Sharpe.

The Palawan flowerpecker was found commonly in the forest at Brooke's Point, Sarong, Danelit, Candauaga, Bonabona, Tagbariri, Calatugas, Puerto Princesa, and Balabac. It was a quite fearless and very active little bird. Specimens were secured at Brooke's Point.

Acmonorhynchus affinis sp. nov.

Characters of the species.—Very similar to *Acmonorhynchus aeruginosus* (Bourns and Worcester) but upper parts decidedly

more greenish; remiges and rectrices with broader, brighter olivaceous edging; terminal white spots on outer rectrices smaller, more sharply defined; under parts paler generally but with the pale areas, though more extensive, less pure white; ventral streaks indistinct or obscured by pale margins to feathers; size smaller; bill shorter and broader in proportion, more obtuse. Sexes similar.

Type.—No. 1446, male, adult, collection of J. T. Zimmer; Brooke's Point, Palawan, P. I., March 14, 1916, collected by J. T. Zimmer.

Description.—Above olivaceous, back and interscapulars between dark citrine and warbler green, becoming browner on the head, brighter and more yellowish on rump and upper tail coverts, which are nearly pyrite yellow; wing coverts, remiges, and rectrices *chætura* black broadly edged with olive yellow, becoming strontian yellow on outer primaries, tertials tipped with olive yellow; two outer pairs of rectrices with sharply defined, narrow terminal spot of white on inner web; feathers of whole top of head with darker brown centers; forehead inclining to ashy; lores whitish; a narrow eye ring pale yellow; a white malar line separated from the throat by an indistinct brown line; throat white; rest of under parts white with a buffy tinge, almost marguerite yellow; breast, flanks, and sides of abdomen indistinctly streaked with dark hair brown, more or less obscured by pale margins to the feathers; under tail coverts with median, basal brown markings. Length, 111 millimeters; wing, 63; tail, 35; tarsus, 14; culmen from base, 7; bill from nostril, 5; greatest width of bill, 7.²

Type.—No. 1499, female, adult, collection of J. T. Zimmer; Brooke's Point, Palawan, P. I., March 31, 1916, collected by J. T. Zimmer.

Description.—Indistinguishable from the male in general appearance. Length, 112 millimeters; wing, 60; tail, 32; tarsus, 14; culmen from base, 8; bill from nostril, 6; greatest width of bill, 7.

Only two individuals of this species were seen, the two which constitute the types. They were found in the deep forest asso-

² A series of four adult males of *A. æruginosus* in my collection from Luzon have the following respective measurements (in millimeters): Length, 116, 117, 113, 118; wing, 66, 66.5, 66, 67; tail, 35, 37, 38, 38; tarsus, 14, 14, 14, 14; culmen from base, 9, 9, ?, 9; bill from nostril, 6.5, 6.5, ?, 7; greatest width of bill, 7, 7, 6.5, 6.5. One specimen has the tip of its bill damaged; hence the interrogations.

ciated with *Prionochilus johannae* in both cases. So far as I know there are no other records of any birds of this genus having been found on Palawan.

NECTARINIIDÆ

Æthopyga shelleyi Sharpe.

Shelley's sunbird was quite rare, but it was occasionally found in the forest in company with other species of sunbirds. Its song was a peculiar, thin pipe, very high in tone, difficult to describe, but quite distinctive and unmistakable when once heard. Records and specimens are from Brooke's Point and Balabac.

Cinnyris sperata (Linnæus).

The red-breasted sunbird was seen occasionally in company with other species of the family, but it was rather uncommon and more wary than the others, and was usually the first to take alarm. The brilliant plumage of the males made them conspicuous even at a distance, while if they were in the bright sunlight they were dazzling. I noted the species only at Brooke's Point, where I secured four males.

Cinnyris aurora (Tweeddale).

The dap-dap, or coral, trees (*Erythrina indica?*) were in full bloom at Brooke's Point, and about their flaming blossoms were scores of bright-hued sunbirds of several species among which the present one was most in evidence. One of these trees, not a great distance from the house, was one of the liveliest spots in the forest. At times I have seen parrots, cockatoos, leaf-birds, nuthatches, chickadees, woodpeckers, orioles, flowerpeckers, sunbirds of various kinds, spider-hunters, pigeons, and starlings, all in this tree at once, while in nearby foliage were cuckoos, fairy bluebirds, flycatchers, minivets, thrushes, tailor-birds, bulbuls, and the like. The clamor was indescribable, and the conglomeration of assorted colors exhibited by the assemblage and set off by the brilliant blossoms of the tree was most striking and yet harmonious. Toward the latter part of my stay in the region the dap-daps began to drop their flowers and put out leaves and the host of visitors once accustomed to assemble and feast on these hospitable branches now sought other places of entertainment. Then these spots where I had previously found the bird life most abundant became by comparison quite deserted.

Cinnyris aurora was noted at every locality visited. Specimens were secured at Brooke's Point.

***Anthreptes malaccensis* (Scopoli).**

The brown-throated sunbird was common, particularly about the dap-dap trees. The localities of observation were Brooke's Point, Sarong, Candauaga, Bonabona, and Balabac. Specimens were taken at Brooke's Point.

***Arachnothera dilutior* Sharpe.**

Pale spider-hunters were not common, but I saw them occasionally at Brooke's Point, sometimes in company with other birds about the fiery dap-daps, sometimes alone in the deeper forest. To me they always appeared grave and solemn, with owlish demeanor, this aspect being due, no doubt, partly to their quiet habits and partly to their long bills and "spectacled" eyes. Most of my records are from Brooke's Point as are all of my specimens. One bird was seen at Bonabona.

MOTACILLIDÆ***Motacilla ocularis* Swinhoe.**

I noted the streak-eyed wagtail only at Brooke's Point. On March 11 I saw two of these wagtails on the beach; they were very wild and would not permit me to approach, but flew off around a point where I could not follow them. The following day I revisited the sandspit where I had seen the wagtails in the hope of seeing them again and possibly of securing specimens. I was partially successful. One bird was present. As before, it flew immediately upon sighting me, but it alighted on the beach nearby, and by keeping some shrubbery between myself and the bird I managed to get close enough for a long shot. The specimen I thus obtained was a female in molt with the chin and throat black centrally and white laterally. Otherwise the plumage is the full summer one.

***Motacilla melanope* Pallas.**

The gray wagtail was rather common about the cleared ground near the settlement at Brooke's Point, but it was not seen elsewhere.

***Budytes leucostriatus* Homeyer.**

The Siberian yellow wagtail was noted at Brooke's Point and Bonabona usually, except at the last named locality, in company with the preceding species. One specimen was taken.

***Anthus gustavi* Swinhoe.**

The Petchora pipit was frequently flushed from the ground in the deep forest at Brooke's Point. Usually when flushed it flew for only a short distance before alighting on the ground

again. Sometimes it did not fly at all, but ran or walked rapidly away not in a straight line but by a tortuous course behind plants, bits of rubbish and the like, which concealed its movements and helped it to escape. On a few occasions it ascended to the branches of nearby trees, sometimes to a considerable height. Although not rare at Brooke's Point the species was not found at any other locality. Several specimens were taken. *Anthus cervinus* (Pallas).

At Brooke's Point there were one or two flocks of red-throated pipits, which could usually be found in a clearing at the edge of the forest near the settlement. There I took six specimens, which exhibit a wide gradation of plumage, ranging from the garb of the young bird to full adult livery. Birds with the streaked, young plumage were most in evidence.

PLOCEIDÆ

Munia jagori Martens.

Philippine weavers were common in the grassland and rice fields, where they occurred in small flocks, usually among the plants near the ground and consequently unseen until they whirred up from underfoot. I saw the species at Brooke's Point, Sarong, Candauaga, Bonabona, Tagbariri, and Puerto Princesa.

Munia cabanisi Sharpe.

Cabanis's weaver was less common than the preceding species, but was found in the same habitat and at the same localities.

ORIOLIDÆ

Oriolus acrorhynchus Vigors.

The brilliant golden and black plumage of the Philippine oriole made it a conspicuous bird wherever it was found, and it was present throughout the region. My records are from all points except Dadagican. A single immature specimen was taken at Brooke's Point.

Oriolus xanthonotus Horsfield.

The black-headed oriole was rare and seen only at Brooke's Point. It was solitary and silent, and seemed fond of concealing itself in the denser parts of the foliage and of the forest. Three specimens were secured.

DICRURIDÆ

Dicruopsis palawanensis (Tweeddale).

The Palawan drongo was common in the forest at Brooke's Point and Candauaga but was not seen elsewhere. It was very

inquisitive in habits but was rather inclined to disappear, once its curiosity was satisfied. Specimens were taken at Brooke's Point.

Bhuchanga palawanensis Whitehead.

The Palawan gray drongo was seen at Brooke's Point, Candauga, Bonabona, Calatugas, and Balabac. Specimens were secured at Brooke's Point. This bird was extremely graceful on the wing and seemed fond of performing its aërial evolutions. Along the trails and in the deeper parts of the forest it was often seen darting about through the trees or resting momentarily between flights.

STURNIDÆ

Sturnia philippensis (Forster).

At Tagbariri on April 6 I collected two females of this species from a flock, which had alighted in the top of a large dead tree. I saw no others in the region.

EULABETIDÆ

Eulabes palawanensis Sharpe.

The Palawan wattled myna was common in the forests and was seen at all points except Dadagican and Puerto Princesa. These birds are very interesting performers and have a variety of catcalls, whistles, squeaks, and whining notes, some of them quite unbirdlike and none of them musical. They often imitate their neighbors in the forest—birds and other creatures—sometimes with considerable success. They also readily learn to talk, for which reason they are common cage birds among the natives of the region. Specimens were taken at Brooke's Point.

Lamprocorax panayensis (Scopoli).

The Philippine glossy starling was abundant throughout the forest and about the dead trees in the clearings. Some of the birds appeared to be paired, such couples often keeping to themselves, but most of them were in flocks of a dozen or more individuals. They are compact little birds and can fly quite fast when they choose. I recorded the species at every locality except Dadagican and secured specimens at Brooke's Point.

CORVIDÆ

Corvus pusillus Tweeddale.

The little crow was rather common at all points except Dadagican. It was often heard, but it was very shy and was quick to take alarm when approached.

Record of specimens of birds collected in Palawan Island in 1916.

Name.	No.	Sex.	Locality.	Date.
<i>Turnix fasciata</i> (Temminck) -----	1524	♂	Tagbariri -----	April 6.
	1489	♂	Brooke's Point -----	March 28.
<i>Treron nipalensis</i> (Hodgson) -----	1497	♂	-----do-----	March 31.
	1498	♀	-----do-----	Do.
<i>Muscadivores palawanensis</i> (Blasius) -----	1457	♀	-----do-----	March 15.
	1490	♂	-----do-----	March 28.
<i>Spilopelia tigrina</i> (Temminck and Knip) -----	1491	♀	-----do-----	Do.
<i>Squatarola squatarola</i> (Linnæus) -----	1509	♂	-----do-----	April 1.
<i>Ochthodromus geoffroyi</i> (Wagler) -----	1515	♀	-----do-----	April 2.
<i>Numenius variegatus</i> (Scopoli) -----	1467	♀	Sarong -----	March 18.
	1468	♀	-----do-----	Do.
<i>Demigretta sacra</i> (Gmelin) -----	1459	♂	Brooke's Point -----	March 17.
	1466	♀	Sarong' -----	March 18.
<i>Cacatua haematuropygia</i> (P. L. S. Müller) -----	1384	♀	Brooke's Point -----	March 9.
	1385	♀	-----do-----	Do.
	1449	♂	-----do-----	March 14.
	1420	♂	-----do-----	March 12.
<i>Prioniturus cyaneiceps</i> (Sharpe) -----	1421	♀	-----do-----	Do.
	1450	♀	-----do-----	March 15.
	1510	♂	-----do-----	April 2.
	1358	♂	-----do-----	March 6.
<i>Tanygnathus lucionensis</i> (Linnæus) -----	1359	♂	-----do-----	Do.
	1514	♂	-----do-----	April 2.
<i>Gymnolæmus lemprieri</i> (Sharpe) -----	1424	♀	-----do-----	March 12.
	1395	♂	-----do-----	March 9.
	1402	♂	-----do-----	March 10.
	1401	♀	-----do-----	Do.
<i>Caprimulgus macrurus</i> Horsfield -----	1443	♂	-----do-----	March 13.
	1442	♂	-----do-----	Do.
	1439	♂	-----do-----	Do.
	1440	♂	-----do-----	Do.
	1441	♀	-----do-----	Do.
<i>Cacomantis merulinus</i> (Scopoli) -----	1444	♀	-----do-----	March 14.
<i>Chalcococcyx xanthorhynchus</i> (Horsfield) -----	1351	♂	-----do-----	March 6.
	1381	♂	-----do-----	March 8.
	1485	♂	-----do-----	March 28.
<i>Eudynamys mindanensis</i> (Linnæus) -----	1488	♂	-----do-----	Do.
	1487	♀	-----do-----	Do.
	1374	♀	-----do-----	March 8.
<i>Dryococcyx harringtoni</i> Sharpe -----	1469	♀	Balabac -----	March 20.
	1473	♀	Candauaga -----	March 22.
	1483	♀	Bonabona -----	March 25.
<i>Tiga everetti</i> Tweeddale -----	1342	♂	Brooke's Point -----	March 5.
	1386	♂	-----do-----	March 9.
<i>Thripornax hargitti</i> Sharpe -----	1460	♂	-----do-----	March 17.
<i>Pitta propinqua</i> (Sharpe) -----	1496	♂	-----do-----	March 31.
<i>Pitta atricapilla</i> Lesson -----	1419	♂	-----do-----	March 12.
	1495	♂	-----do-----	March 30.
<i>Hemichelidon griseosticta</i> Swinhoe -----	1477	♂	Balabac -----	March 20.
	1511	♂	Candauaga -----	March 22.
			Brooke's Point -----	April 2.

Record of specimens of birds collected in Palawan Island in 1916—Cont.

Name.	No.	Sex.	Locality.	Date.
<i>Cyornis lemprieri</i> Sharpe	1433	♂	do	March 13.
	1445	♂	do	March 14.
	1472	♀	Dandelit	March 21.
	1482	♂	Candauaga	March 23.
	1481	♀	do	Do.
<i>Cyanoptila bella</i> (Hay)	1434	♀	Brooke's Point	March 28.
<i>Hypothymis occipitalis</i> (Vigors)	1353	♂	do	March 6.
	1438	♀	do	March 13.
	1410	♂	do	March 11.
	1409	♀	do	Do.
<i>Xeocephalus cyanescens</i> Sharpe	1426	♂	do	March 12.
	1435	♂	do	March 13.
	1521	♂	do	April 3.
	1346	♂	do	March 5.
	1345	♀	do	Do.
<i>Artamides difficilis</i> (Hartert)	1373	♂	do	March 7.
	1413	♀	do	March 11.
	1339	♂	Puerto Princesa	March 4.
<i>Pericrocotus igneus</i> Blyth	1429	♂	Brooke's Point	March 12.
	1428	♀	do	Do.
	1451	♂	do	March 15.
	1452	♀	do	Do.
<i>Ægithina viridis</i> (Bonaparte)	1464	♂	do	March 17.
	1463	♀	do	Do.
	1354	♂	do	March 6.
	1365	♂	do	March 7.
	1361	♀	do	Do.
<i>Chloropsis palawanensis</i> (Sharpe)	1364	♀	do	Do.
	1512	♀	do	April 2.
	1520	♂	do	April 3.
	1340	♀	Puerto Princesa	March 4.
	1417	♂	Brooke's Point	March 12.
	1418	♂	do	Do.
<i>Irena tweeddalei</i> Sharpe	1416	♀	do	Do.
	1475	♂	Candauaga	March 22.
	1476	♂	do	Do.
	1474	♀	do	Do.
	1341	♂	Puerto Princesa	March 4.
	1390	♂	Brooke's Point	March 9.
<i>Microtarsus atriceps</i> (Temminck)	1430	♂	do	March 12.
	1434	♂	do	March 13.
	1347	♂	do	March 6.
	1356	♀	do	Do.
	1378	♂	do	March 8.
<i>Trichophorus frater</i> (Sharpe)	1412	(?)	do	March 11.
	1447	♂	do	March 14.
	1480	♂	Candauaga	March 22.
	1392	♂	Brooke's Point	March 9.
	1478	♂	Candauaga	March 22.
<i>Pycnonotus cinereifrons</i> (Tweeddale)	1479	♂	do	Do.
	1507	♂	Brooke's Point	April 1.
	1513	♂	do	April 2.

Record of specimens of birds collected in Palawan Island in 1916—Cont.

Name.	No.	Sex.	Locality.	Date.
<i>Turdinus rufifrons</i> (Tweeddale)	1431	♂	do	March 13.
	1432	♀	do	Do.
	1369	♂	do	March 7.
	1380	♂	do	March 8.
	1376	♂	do	Do.
<i>Mixornis woodi</i> Sharpe	1377	♀	do	Do.
	1454	♂	do	March 15.
	1465	♂	do	March 17.
	1516	♂	do	April 4.
	1350	♂	do	March 6.
<i>Kittacincla nigra</i> Sharpe	1355	♂	do	Do.
	1375	♂	do	March 8
<i>Locustella ochotensis</i> (Middendorf)	1437	♀	do	March 13.
<i>Orthotomus ruficeps</i> (Lesson)	1462	♂	do	March 17.
	1371	♀	Brooke's Point	March 7.
	1422	♂	do	March 12.
	1436	♂	do	March 13.
<i>Hyloterpe whiteheadi</i> Sharpe	1423	♂	do	March 12.
	1456	♂	do	March 15.
	1453	♀	do	Do.
<i>Pardaliparus amabilis</i> (Sharpe)	1343	♂	do	March 5.
	1493	♀	do	March 29.
<i>Callisitta palawana</i> (Hartert)	1344	♂	do	March 5.
	1455	♀	do	March 15.
	1506	♂	do	April 1.
	1348	♂	do	March 6.
<i>Prionochilus johannae</i> Sharpe	1399	♂	do	March 10.
	1403	♀	do	March 11.
	1501	♀	do	March 31.
<i>Acmonorhynchus affinis</i> Zimmer sp. nov.	1446	♂	do	March 14.
	1499	♀	do	March 31.
<i>Aethopyga shelleyi</i> Sharpe	1370	♂	do	March 7.
	1471	♂	Balabac	March 20.
	1366	♂	Brooke's Point	March 7.
<i>Cinnyris sperata</i> (Linnæus)	1368	♂	do	Do.
	1388	♂	do	March 9.
	1448	♂	do	March 14.
	1367	♂	do	March 7.
	1393	♂	do	March 9.
<i>Cinnyris aurora</i> (Tweeddale)	1394	♀	do	Do.
	1398	♀	do	March 10.
	1407	♀	do	March 11.
	1360	♂	do	March 7.
	1363	♂	do	Do.
	1362	♂	do	Do.
	1391	♂	do	March 9.
<i>Anthreptes malaccensis</i> (Scopoli)	1400	♂	do	March 10.
	1406	♂	do	March 11.
	1405	♂	do	Do.
	1408	♀	do	Do.
	1504	♀	do	April 1.

Record of specimens of birds collected in Palawan Island in 1916—Cont.

Name.	No.	Sex.	Locality.	Date.
<i>Arachnothera dilutior</i> Sharpe	1389	♂	do	March 9.
	1404	♂	do	March 11.
	1411	♂	do	Do.
	1486	♀	do	March 27.
<i>Motacilla ocularis</i> Swinhoe	1427	♀	do	March 12.
<i>Budytes leucostriatus</i> Homeyer	1503	♂	do	March 31.
<i>Anthus gustavi</i> Swinhoe	1458	♂	do	March 16.
	1494	♀	do	March 30.
	1505	♂	do	April 1.
	1492	♂	do	March 29.
<i>Anthus cervinus</i> (Pallas)	1500	♀	do	March 31.
	1502	♀	do	Do.
	1519	♂	do	April 3.
	1517	♀	do	Do.
<i>Oriolus acrorhynchus</i> Vigors	1518	♀	do	Do.
	1387	♀	do	March 9.
	1357	♂	do	March 6.
	1396	♀	do	March 10.
<i>Dicruropsis palawanensis</i> (Tweeddale)	1461	♂	do	March 17.
	1397	♀	do	March 10.
	1508	♂	do	April 1.
	1352	♂	do	March 6.
<i>Bhuchanga palawanensis</i> Whitehead	1349	♀	do	Do.
<i>Sturnia philippensis</i> (Forster)	1522	♀	Tagbariri	April 6.
	1523	♀	do	Do.
<i>Lamprocorax panayensis</i> (Scopoli)	1372	♂	Brooke's Point	March 7.
	1379	♀	do	March 8.
	1425	♂	do	March 12.
<i>Eulabes palawanensis</i> Sharpe	1382	♀	do	March 8.
	1415	♂	do	March 11.
	1414	♀	do	Do.

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